



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5

77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

EPA Region 5 Records Ctr.



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4/25/02

REPLY TO THE ATTENTION OF

C-14J

April 25, 2002

Ms. Barbara Magel
Karaganis, White & Magel
414 N. Orleans
Chicago, Illinois 60610

Re: Beverly Gravel Property
Request for No Further Action Determination

Dear Ms. Magel:

This letter responds to your January 8, 2002 letter in which you requested that U.S. EPA promptly issue a No Further Action determination with respect to radiological contamination at the Beverly Gravel property where an unknown quantity of radioactively contaminated soils and debris from the Grand Pier development were placed from December 1999 until March 2000. This letter responds to each of the issues raised in your letter and explains why the U.S. EPA can not issue a No Further Action determination for this property at this time.

Your January 8, 2000 letter states that the U.S. EPA's question about the potential for the existence of an undetected subsurface deposit of radioactive materials from the Grand Pier development at Beverly Gravel was first raised in the Fall of 2001 and is therefore untimely. Simply dismissing U.S. EPA's concerns as "untimely" does not overcome their existence or legitimacy.

Furthermore, our recollection is that the problem of undetected contamination was discussed as early as the June 26, 2000 Beverly Gravel meeting at U.S. EPA's office and again during the July 10, 2000 meeting at Beverly Gravel. Surveillance of the property in 18-inch lifts was necessary, we explained, due to the limitation of gamma detection instruments. Only by examining the soils and debris in 18-inch lifts could we be certain that all the radioactive contamination would be located. No other methodology, given the instrumentation limits, could provide that "guarantee." That is why the July 17, 2000 STS Work Plan (which was approved October 4, 2000) contained a requirement for surveillance across the impacted Beverly Gravel property in 18-inch lifts.

When STS later sought to modify the Work Plan, U.S. EPA again raised the issue. At the December 7, 2000 meeting held to discuss the proposed Limited Excavation Option, U.S. EPA clearly and emphatically stated that the 10 x 10 grid would not locate potential radioactive contamination with the same efficiency as the 18-inch lifts and, as a result, U.S. EPA could not

guarantee that the modified Limited Excavation Option Work Plan would result in the removal of all the radioactive contamination. Your firm participated in that meeting and assented to the Work Plan with full knowledge of U.S. EPA's caveat regarding the limitations of the 10 x 10 meter grid sampling approach. U.S. EPA's letter approving the Limited Excavation Option was "based upon U.S. EPA's meeting held earlier today with ... the ... parties associated with Beverly Gravel." U.S. EPA does not debate that it approved the delineation, removal and backfilling that was performed in accordance with the modified Limited Excavation Option Work Plan but we do debate your insistence that you were unaware of the limitations of that Limited Excavation Option.

Indeed, on February 7, 2001, U.S. EPA sent a letter to STS that noted that the subsurface readings had not located the largest area of contamination and questioned why such contamination would not exist in other unexcavated areas. A copy of that letter was sent to your client's contractor. In its February 14, 2001 response, STS did not answer the question but said U.S. EPA in its December 7, 2000 letter concurred that the distribution of borings were sufficient for the drilling, survey and removal effort. It was following receipt of that response that U.S. EPA solicited from your client the development plans and drawings to determine where the golf course and open areas would be in relation to the location of the Grand Pier deposition area. As you recall, at the time that this matter arose, U.S. EPA and the other parties involved were repeatedly told that your client was planning to develop the property in the immediate future as a golf course with a surrounding residential development.

Your letter also states that initial Beverly Gravel property walkover survey resulted in a greater sampling density for radioactive deposits within 18 inches of the surface. Most of the contaminated material was found buried at depths of 3-6 feet, so unfortunately, the surface walkover survey did not increase the sampling grid density where it actually mattered.

You then claim that a "10 x 10" grid is an accepted aspect of radiological characterization and remediation" and relied upon by the various regulatory agencies. The "10 x 10" grid approach you reference specifically includes five composite samples within each grid. These composite samples were not taken at Beverly Gravel, so it is not comparable to the grid approach used at Beverly Gravel. U.S. EPA Region 5 has used the "10 x 10" grid principally as an aspect of post-remediation verification, not for discovery. Ten meters by 10 meters (roughly 33 feet by 33 feet) generally is considered a coarse grid.

We disagree that U.S. EPA does not have a concern with radioactive hot spots. Our verification protocol has been to first survey the entire grid to identify and eliminate hot spots. When the hot spots are removed, we then take a five sample composite to verify through a lab that the soil criterion has been met.

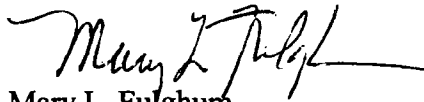
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Nor do we concur with your conclusion that the likelihood of missing any significant amount of material with the 10 meter x 10 meter sampling density at Beverly Gravel is "low." The 10 x 10 meter grid (33 feet x 33 feet) sampling protocol only achieves a 90% confidence level if we assume a minimum hot spot size of 1,060 square feet which is the area covered by a circular hot spot with a 36.7 foot diameter. Typically, however, U.S. EPA assumes a minimum acceptable hot spot size of 100 square feet which is the area covered by a circular hot spot with a 11.3 foot diameter. In the case of Beverly Gravel, to achieve 90% certainty would require substantial sampling and still might not achieve the level of comfort desired. When we met last summer to discuss this matter, your firm found no error with our statistical analysis.

The analysis shows there is grossly insufficient basis to issue a No Further Action determination. It is for that reason that we have been working with your firm for many months to determine the location of the proposed golf course and housing units because we believe that if the land were maintained as a golf course or otherwise undeveloped there would be little risk of exposure to any radioactive materials that might have been overlooked by the grid approach used here. We urge you to continue to work with us to resolve both your concerns and our concerns.

Sincerely,


Mary L. Fulghum
Associate Regional Counsel

cc: Fredrick Mueller
J.T. Smith

bcc: Padma Klejwa
Fred Micke
Verneta Simon
Larry Jensen